

REMARKS/ARGUMENTS

The specification is objected to for lacking trademark symbols in various places. The Examiner gives as an example the word “Windows” on page 10 of the specification. To overcome this objection, the specification has been amended to include trademark symbols where appropriate. In particular, trademark symbols have been added to expressions appearing in paragraphs 0010, 0011, 0045, 0050, 0055, 0057, 0060, 0062, 0064, 0071, 0073, 0078, 0085, 0087, 0088, 0089, 0091, and 0094.

Claims 17 and 33 are objected to for reciting the word “ones” in lines 7 and 2, respectively. To better defining the invention, the word “ones” has been deleted from amended Claim 17 and has been replaced by the expression “one or more” in amended Claim 33.

Claims 18-21, 23, 28-30, 32, and 34 are objected to for reciting the limitation “at least one of”. To better define the invention, the expression “at least one of” has been deleted from amended Claim 21 and has been replaced by the expression “one or more of” in amended Claims 18-20, 23, 28, 30, 32, and 34. Claim 29 has been cancelled (see below).

Claims 25, 33, and 34 stand rejected under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention. With respect to Claims 25 and 33, to better define the invention, Claim 25 has been amended to recite “customer system” rather than “users”. Claims 17 and 26-28 have been similarly amended. With respect to Claim 34, to better define the invention, the claim has been amended by replacing the limitation “and said users to store and process sequences of instructions and to enable communications with said users” with the limitation “means for communications”.

Claims 17-23, 25-34, and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Application Publication No. 2002/0174182 by Wilkinson et al. (“Wilkinson”) in view of United States Patent No. 6,636,860 to Vishnubhotla (“Vishnubhotla”). The Applicant notes that Vishnubhotla is a new reference not cited by the Examiner in the first Office Action of July 18, 2006. The Wilkinson reference was cited by the Examiner in the first Office Action.

Claims 17-23, 25-28, and 30-34 have been amended with a view to better defining the invention. The subject matter of Claim 29 has been included in amended Claim 17. Claim 29 has been cancelled accordingly. No new matter has been entered by these amendments. In addition, new method Claims 37-48 have been added with a view to better defining the invention. The Applicant respectfully submits that the subject matter of amended Claim 17 and new Claim 37 (and the claims depending therefrom) is not taught or suggested by Wilkinson or Vishnubhotla, either alone or in combination. Consequently, the Examiner is respectfully requested to consider the amended, previously presented, and new claims in view of the following comments.

For reference, amended Claim 17 recites the following:

17. (Currently Amended) A data mining system for delivering presentations associated with data mining models, said data mining system comprising:

a repository to store said data mining models, customer attributes, and presentation definitions;

means to edit said data mining models, said presentation definitions, and said customer attributes;

means to generate a presentation to deliver to a customer system; wherein said means to generate includes an analytic decision engine system including model presentation services and scoring services modules; and,

means to receive inputs from said customer system and to deliver said presentation to said customer system;

wherein said inputs include a customer identification and a presentation definition identification;

wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification; wherein said presentation definition includes a reference to a data mining model; and,

wherein said means to generate applies said data mining model to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition.

On page 4 of the Office Action, the Examiner cites Wilkinson against that element of previously presented Claim 17 that recites “a repository to store said data mining models and said presentations”, stating:

“As per claim 17 Wilkinson et al. is directed to a data mining system for delivering presentations associated with data mining models, said data mining system comprising:...a) a repository to store said data mining models and said presentations (Wilkinson et al., paragraph 0032, second column, lines 4-5, wherein information associated with target could mean data models and presentations);...”

For reference, paragraph 0032 of Wilkinson recites the following:

“[0032] The component modules of real time electronic service interaction management system 100 cooperatively operate to facilitate development of an interaction motivation plan and creation of information presentation instructions in accordance with the interaction motivation plan. Database module 110 receives and stores information associated with target interaction (e.g., information about customers such as descriptive and behavioral characteristics and their interactions with real time electronic service interaction management system 100), relevant system state and external state information, as well as information associated with the state of a touch-point (a point of interaction with the system). Data mining module 120 analyzes information utilized to predict and describe target interaction behavior (e.g., through techniques such as segmentation, clustering, affinity analysis, etc.). Testing module 130 creates an interaction motivation test plan. In one exemplary implementation, the interaction motivation test plan is directed at automatically learning about target (e.g., customer) interactions based upon a particular touch-point state (e.g. with particular information presentations). The interaction motivation test plan is also directed at testing (e.g., validating and enhancing) the analysis of information by data mining module 120. Optimization module 140 creates optimizing inputs to an interaction motivation plan. In one exemplary implementation of the present invention, the optimizing inputs are directed to increasing user interactions with respect to the specified objectives (e.g., from a system manager) while meeting predetermined constraints (e.g., also specified by the system

manager). Plan merging module 150 combines the test inputs and optimization inputs into one interaction motivation plan. Target (e.g., customer) interaction module 170 provides instructions to a "touch point" (e.g., website, call center, email, phone system, a graphical user interface, etc.) for presenting information in accordance with an interaction motivation plan. In one embodiment of the present invention, target interaction module 170 also records customer responses and behavior. Management interface module 190 facilitates communication of information to and from campaign sponsors (e.g., campaign managers)."

Thus, from the above selection "information associated with target interaction" is defined as "information about customers such as descriptive and behavioral characteristics and their interactions with real time electronic service interaction management system 100". However, information about customers is not equivalent to data mining models, customer attributes, and presentation definitions as recited in amended Claim 17. As such, the selection from Wilkinson cited by the Examiner does not teach or suggest that element of amended Claim 17 that recites: "a repository to store said data mining models, customer attributes, and presentation definitions".

On pages 4-5 of the Office Action, the Examiner cites Wilkinson against that element of previously presented Claim 17 that recites "means to access, create, update, and import said data mining models, said presentations, and content and structure of said repository", stating:

"...b) means for access, create, update, and import said data mining models, said presentations, and content and structure of said repository (Wilkinson et al., paragraph 0032, second column, lines 14-15, wherein 'data mining models' could mean 'interaction motivation plan', paragraph 0032, second column, lines 29-33; paragraph 0040, lines 5-10, wherein having fields could mean that they were specifically created;..."

For reference, paragraph 0040 of Wilkinson recites the following:

"[0040] In one embodiment of the present invention, database 110 is a persistent data store that records activity received by the customer interaction module 170 and information from other sources (e.g., other systems or databases) not shown. Database 110 receives two types

of data in one exemplary implementation of the present invention. The first type of data is related to an interaction motivation plan. For every offer action, database 110 records the customer identifier, the offer, the time and any other customer or system state that is relevant. The second type of data recorded in the database 110 is any activity or state at the customer interaction module that is relevant to the customer behavior model or that is useful for data mining or analysis. This data is deployment-specific and may include customer behavior data (a customer registered for a service; a customer viewed an article), customer state information (e.g., a new customer is created), customer demographic data (e.g., gender, income), system state (a new product is added), etc.”

With respect to the Examiner’s statement that ““data mining models” could mean ‘interaction motivation plan’”, the Applicant respectfully submits that that does not mean that the selections from paragraphs 0032 and 0040 of Wilkinson cited by the Examiner teach that element of amended Claim 17 that recites: “means to edit said data mining models, said presentation definitions, and said customer attributes”.

On page 5 of the Office Action, the Examiner cites the new Vishnubhotla reference against that element of previously presented Claim 17 that recites “wherein said means to select and prepare includes an analytic decision engine system including model presentation services and scoring services modules”. If the Examiner will recall, this was the element that the Applicant added to previously presented Claim 17 from original Claim 24 in the Applicant’s Amendment/Reply of August 17, 2006 to the Examiner’s first Office Action of July 18, 2006. Claim 24 was held to be allowable in the first Office Action. The Examiner states:

“Wilkinson et al. does not teach wherein said means to select and prepare includes an analytic decision engine system including model presentation services and scoring services modules...Vishnubhotla does teach said means to select and prepare includes an analytic decision engine system including model presentation services and scoring services modules (Vishnubhotla, column 8, lines 25-29; column 8, lines 34-37; column 11, lines 55-56)...It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine teaching of Wilkinson et al. with teachings of Vishnubhotla to include means to select and prepare includes an analytic decision engine system including model presentation services and scoring services modules because having choice of data mining models would lessen the need for specialized data mining expertise of end user (Vishnubhotla, column 2, lines 66-67; Vishnubhotla, column 3, lines 1-2)."

For reference, the selections from Vishnubhotla cited by the Examiner above are as follows (context added):

"Many embodiments implement data stores for storing multiple data mining model definitions along with related knowledge bases; in this specification such data stores containing multiple knowledge bases and multiple data mining model definitions are referred to as 'mining bases.' The contents of knowledge bases depend on the kind of data mining algorithm selected for use in a particular data mining model. Knowledge bases used with radial basis function algorithms, for example, contain data describing fitting centers and weighted sums. Knowledge captured in a knowledge base through model training is used by data mining tools internally in applying a data mining model through production training and production scoring. A trained model, as shown in FIG. 1, is typically used to score (126) historical data (128), although as will be discussed below in more detail, some embodiments conduct production scoring directly against production data (128)." (col. 8, lines 25-41)

"Defining a Data Mining Model Based on the Data Schema...Embodiments of the present invention include predefined data mining models. Defining a data mining model typically includes operating the model's principal algorithm in a training mode. The algorithm discussed in the present exemplary embodiment, the value-prediction algorithm, has two modes, a training mode and a scoring mode. In training mode, the value-prediction algorithm builds a data mining model based on a subset of the selected input data, that is, a subset of the historical data. The rest of the input data is used implicitly by the algorithm to test the quality of the model as trained." (col. 11, lines 53-65)

"Accordingly, in analytic applications using data mining tools, there is significant benefit in predefining data mining models whenever possible, as this will enable developers of analytic applications to develop analytic applications capable of automating data mining cycles so that end users may train and apply predefined data mining models with no need for specialized data mining expertise and with no need for end user intervention in data mining processes as such." (col. 2, line 62 to col. 3, line 2)

The above selections from Vishnubhotla mention scoring but they do not mention anything to do with presenting the scores or outcomes of data mining models. In particular, they do not teach generating an outcome for a presentation based on a score from a data mining model. As such, they do not teach that element of amended Claim 17 that recites "means to generate a presentation to deliver to a customer system; wherein said means to generate includes an analytic decision engine system including model presentation services and scoring services modules".

For reference, Claim 29 as previously presented recites the following:

29. (Previously Presented) The system of claim 17 wherein said first inputs include attributes provided by or associated with said users including at least one of an identity and a locator.

On page 8 of the Office Action, the Examiner cites Wilkinson against previously presented Claim 29, stating:

"As per claim 29 Wilkinson et al. as modified is directed to said first inputs include attributes provided by or associated with said users including at least one of an identity and a locator (Wilkinson et al., paragraph 0032, second column, lines 6-8; paragraph 0037, second column 10-11)."

Paragraph 0032 of Wilkinson is set out above. For reference, paragraph 0037 of Wilkinson recites the following:

"[0037] In one embodiment of the present invention, customer interaction module 170 receives target interaction information and provides presentation information and instructions in accordance with an interaction motivation plan. In one embodiment of the present invention, customer interaction module 170 includes a graphical user interface that displays stimulation information in accordance with an interaction motivation plan (e.g., a product or service offer plan). In one embodiment of the present invention, customer interaction module 170 also records which stimulation action (e.g., offer action) was made and customer response actions including the customer identification and system state when the response action occurred. In one exemplary implementation of the present invention, customer interaction module 170 records customer actions and states that, although not relevant to the current interaction motivation plan (e.g., offer plan), are a part of the customer behavior model."

The Applicant respectfully submits that the presentation "locator" recited in previously presented Claim 29 is not taught or suggested by these paragraphs from Wilkinson. With a view to better defining the invention, the subject matter of previously presented Claim 29 has been included in amended Claim 17. Claim 29 has been cancelled accordingly. Note that the presentation "locator" of previously presented Claim 29 has been referred to as a "presentation definition identification" in amended Claim 17. As such, Wilkinson does not teach or suggest those elements of amended Claim 17 that recite: "wherein said inputs include a customer identification and a presentation definition identification; wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification; wherein said presentation definition includes a reference to a data mining model; and, wherein said means to generate applies said data mining model to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition".

To conclude, the Applicant believes that amended Claim 17 is patentable over Wilkinson and Vishnubhotla as these references do not teach or suggest the subject matter of amended Claim 17. In particular, Wilkinson and Vishnubhotla do not teach or suggest those elements of amended Claim 17 that recite: "means to generate a presentation to deliver to a customer system; wherein said means to

generate includes an analytic decision engine system including model presentation services and scoring services modules” and “wherein said inputs include a customer identification and a presentation definition identification; wherein said means to generate selects a presentation definition using said presentation definition identification and selects a customer attribute using said customer identification; wherein said presentation definition includes a reference to a data mining model; and, wherein said means to generate applies said data mining model to said customer attribute to produce an outcome for display in said presentation according to a format included in said presentation definition”.

In addition, the Applicant believes that Claims 18-23, 25-28, 30-34, and 36, being dependent on amended Claim 17, and introducing additional patentable features thereto, are also patentable over Wilkinson and Vishnubhotla.

Note that new method Claims 37-48 should be taken as replacements for original method Claims 1-16. Original method Claims 1-16 were cancelled by the Applicant’s Amendment/Reply of August 17, 2006 in response to the Examiner’s holding in the first Office Action of July 18, 2006 that original system Claim 24 was allowable.

For reasons similar to those given above with respect to amended Claim 17, the Applicant believes that new Claim 37 is patentable over Wilkinson and Vishnubhotla as these references do not teach or suggest the subject matter of new Claim 37. In addition, the Applicant believes that new Claims 38-48, being dependent on new Claim 37, and introducing additional patentable features thereto, are also patentable over Wilkinson and Vishnubhotla.

Please note that Claim 29 has been cancelled without prejudice. The Applicant reserves the right to pursue this cancelled claim in a continuing application or otherwise.

No new matter has been entered by the above amendments.

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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